

## LA-UR-21-29613

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Title: Agile Strategy Living Laboratory Reflection Paper

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Intended for: reference document

Issued: 2021-09-29

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Getting my team members to all agree that we needed to pursue possible solutions for our documentation review process was an idea that came across very well with the team. This specific topic has been something that as a team we have been having struggles with recently due to the sheer amount of documents that have been flowing through the team's hands to review. We all realized that the process had areas that we could change that would eliminate confusion for new employees, reduce backload, and improve efficiency and quality of the documentation reviews. The key personnel on our team that have the most direct control and impact over this process are the production control specialists, documentation preparation and review is their primary job function. They are denoted in the action pack as "doc spec 1" and this individual has 12 years of expertise in their role. The engineers are denoted as "engineer 1, 2, 3" respectively. Engineer 1 has 10 years of experience in this team, engineer 3 has 38 years of experience on the team, and engineer 2 is myself with 5 years of expertise with this team and 5 with the department of defense.

Scheduling meetings surrounding these improvements could have gone much smoother the issue here was the timing of this activity, as the fiscal year comes to a financial closing period for the US government on the 30<sup>th</sup> of September. The workload across the entire division increases to somewhat of a frantic pace. This is just the case every year no matter which government agency that one is involved in. In some of the meetings not everyone could attend which made the discussions more one sided. Often times these meetings ran very short as other more important priorities took over the use of the team's time which was expected. In the field of R&D the concepts of strategic doing and agile strategy can be applied to most every conversation that a single or team of engineers are asking each other or in direct communication with the customer on the problem, design, or reporting requirements, and contract requirements for any R&D project. Since the team that I work with manages multiple R&D initiatives on a yearly basis, some of the monitoring activities must not ever stop due to the nature of our work. This gives us the opportunity to continually ask ourselves the strategic questions everyday about our processes and projects that we are working on which are non-intuitive and unmistakably complex in most cases.

The building that my team sits in has several large conference rooms, each of these rooms is open to all employees in the building typically this is where we meet and have our discussions on the document review processes improvements it is a safe space. One of our quality subject matter experts does have to meet us from time to time (not every meeting), this person is deployed staff to our team and usually sits on the other side of the lab. Since the onset and recent uptick of the COVID-19 pandemic, most of our team meetings on this topic have been conducted using online conferencing software platforms such as WebEx and G-Suite, and Lucid. While these programs do work, they simply are not the same as face to face meetings in which you can read people's body language. The strongest appreciative question that we had as a team was, "how will this make us feel in the future?" and "what will this look like down the road as the demand for these documentation package reviews slowly increase?" Lastly, "can we make this a process that someone new to the team could reasonably navigate and learn from?" One of the biggest hurdles that my team faces is growing pains to the division, as we are hiring more and more engineers and document specific review staff. It becomes very difficult and frankly frustrating to do your assigned job and teach someone that is new to the job as well.

The hidden assets that we discovered during this activity is that there are dedicated staff and programs at the lab that develop software services for automatic documentation sorting and scanning. The problem that remains is the extent of how far the documents need to be made available to access by defined and controlled users. It has to be department of energy wide, the need is extending past the border of just one lab and the requirements for collaboration on the documents is also increasing.

Other groups outside of our immediate team have been approached for their specific knowledge and expertise on a possible production software design solution. There are several important steps to be completed before these actions from any outside group can be of help. First, we must present our results of this exercise to management. Then a proposal must be written and a funding packet must also be designed before any software development can be initiated. Internally however, my team has identified waste areas which can be seen the associated *Appendix Exhibits 1-2*, and we can directly implement some of these solutions into the current processes these changes are mostly related to redundancy and time wastes. The current management structure that this team operates under can be summarized by the following, “In hierarchical organizations where the decisions are made above and then implemented below, there is less personal commitment to execution. The “back room” made the decision so your ownership is low...” (Morrison, 2019).

The common themes that are seen in our discussions involving this document review process is time used, and time wasted. The most immediate and dramatic effect that was selected as our “Big Easy” is the elimination of multiple levels of management signature on every single sub-assembly document package. The management will still be required for final signature, but we identified this redundancy as another time related waste. Management will be required to sign that final assemble documentation package instead of every single smaller package. The sub-assembly signatory responsibility will be up to the engineers and the document control specialists. Waiting for others so sign the document package that has already been reviewed and approved by the appropriate subject matter experts is a waste, and since are document control folks cannot complete their objectives until every smaller package is signed it causes unnecessary delays and time lag in the process. Mangers are very busy and typically they do not respond as soon as a document is ready for them to sign. With the engineers there is also at times disagreements on the success or unsuccessful compliance by the manufacture to the fabrication specification this has a strong corollary to the following statement “Functional bias is a problem for teams facing new uncertain and complex situations because, with little cognitive diversity, the team will have limited ability to see things differently, engage in different ways (e.g., experiment versus analyzing), or create new options.”, (Reynolds, 2017).

The *Solution Round Table Series Project* has been created as the point in our strategic doing process in which all solutions will be presented not only our team, but to other teams in the division that are working on similar process improvements. The guideposts will be quarterly review meetings that our team will have with the management team, and with the other program stakeholders that our documentation review process effects to monitor changes and improvements. (Kaltenecker, 2015) “Feedback is an essential part of any lean or agile development process. This holds for the technical level as well as for your work management system. This is the first in a series of articles that advocate for complementing the well-known strategies of metrics and meetings with peer feedback.” The small steps that will lead to gradual improvements will also be discussed during these meetings and will sort of represent our version of the 30/30 concept. There will be more than 30 day separation of meetings, but they will be framed the same way. The internal team has scheduled meetings though ought the rest of this fiscal year and into next year regarding this document review process. This will help ensure that the proper nudging and relentlessly improvement will be made effectively. This is also a conduct of operations requirement for the team.

Appendix

Exhibit 1 Time Waste

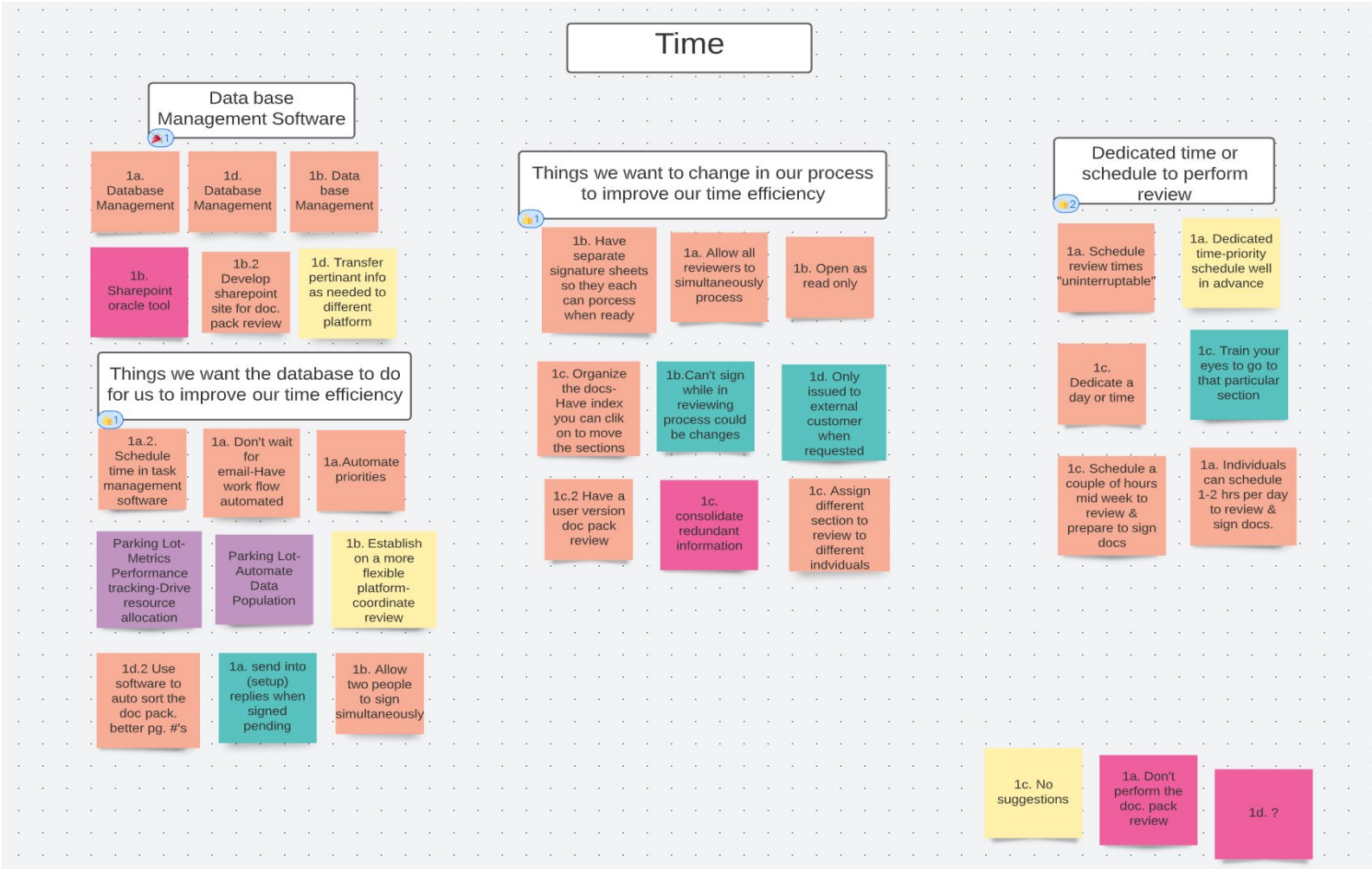
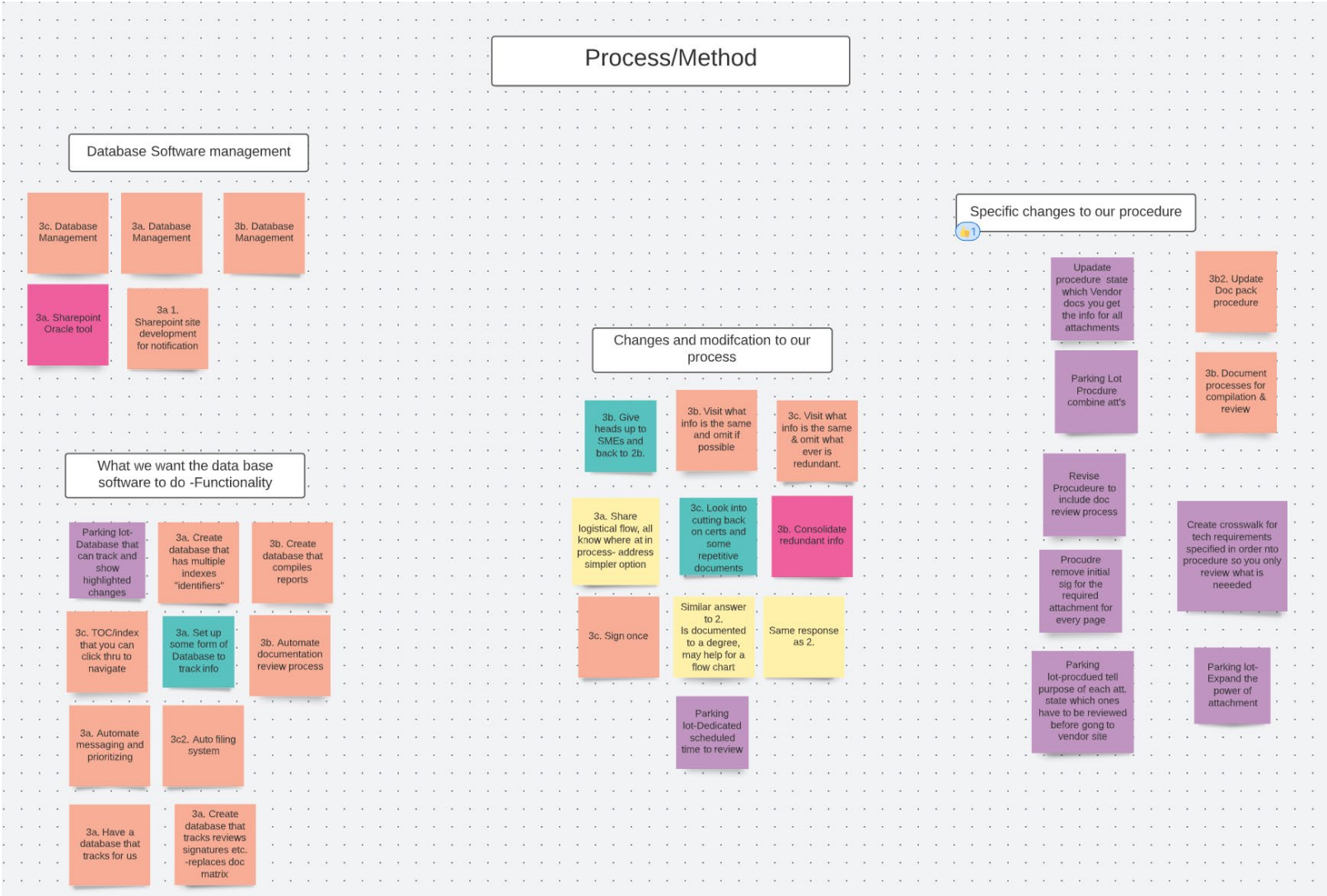


Exhibit 2 Process/ Method



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